

IN THE CLAIMS:

Please amend the claims so as to read as follows:

1. (Cancelled, without prejudice)
2. (Cancelled, without prejudice)
3. (Cancelled, without prejudice)
4. (Cancelled, without prejudice)
5. (Currently Amended) An optical disc including a substrate having pits having at least two different depths formed therein, wherein
the pits have their depths adjusted such that polarity of a signal
representing difference in intensity distribution of a reflected light beam along a tangential direction of a pit string differ at a pit having a first depth from a pit having a second depth and information is recorded by a change of said polarity.
6. (Currently Amended) An optical disc including a substrate having pits having at least two different depths formed therein, wherein
information is recorded in accordance with a change of a polarity of a signal
representing difference in intensity distribution of a reflected light beam along a tangential direction of a pit string, at said pits having at least two different depths.

7. (Currently Amended) An optical disc including a substrate having pits having at least two different depths formed therein, wherein
information is recorded by a combination of a change of a signal in accordance with quantity of reflected light beam from said pits having at least two different depths and a change of a signal indicative of a difference in intensity distribution of the reflected light beam along a tangential direction of a pit string.
8. (Currently Amended) An optical disc including a substrate having pits having at least two different depths formed therein, wherein
main information is recorded by a form of the pits, and additional information is recorded by ~~the depth of a pit~~ a difference of the depths of the pits.
9. (Original) The optical disc according to claim 8, wherein the pit having said additional information is formed deeper than a prescribed depth.
10. (Original) The optical disc according to claim 8, wherein
said additional information is a synchronizing signal for reproducing said optical disc.
11. (Original) The optical disc according to claim 8, wherein said additional information is address information corresponding to said main information.

12. (Original) The optical disc according to claim 8, wherein said additional information is a de-scramble key of said main information.
13. (Original) The optical disc according to claim 8, wherein said additional information is error correction information for said main information.
14. (Original) The optical disc according to claim 8, wherein unit of recording of said additional information is recorded in association with a unit of recording of said main information.
15. (Withdrawn) An optical disc reproducing device, comprising:
 - a first detecting unit detecting a first signal in accordance with a quantity of reflected light beam from an optical disc;
 - a second detecting unit detecting a second signal representing a difference in intensity distribution of the reflected light beam along a tangential direction of a pit string of said optical disc; and
 - a reproducing unit reproducing information recorded on said optical disc based on the first signal detected by said first detecting unit and the second signal detected by said second detecting unit
16. (Withdrawn) The optical disc reproducing device according to claim 15, wherein said reproducing unit reproduces information recorded on said optical disc based on polarity of the second signal detected by said second detecting unit.

17. (Withdrawn) The optical disc reproducing device according to claim 16,
wherein said reproducing unit reproduces three-valued information recorded on said
optical disc.
18. (Withdrawn) The optical disc reproducing device according to claim 15,
wherein
said reproducing unit includes a first comparing circuit comparing
the second signal detected by said second detecting unit with first
reference value and outputting a positive signal when voltage of said
second signal is not lower than said first reference value,
a second comparing circuit comparing the second signal detected
by said second detecting unit with a second reference value, and
outputting a negative signal when voltage of said second signal is not
higher than said second reference value, and
an additional circuit adding the positive signal output from said
first comparing circuit and the negative signal output from said second
comparing circuit.

19. (Withdrawn) The optical disc reproducing device according to claim 15,

wherein

said reproducing unit includes a first comparing circuit comparing
the second signal detected by said second detecting unit with a first
reference value,
a second comparing circuit comparing the second signal detected
by said second detecting unit with a second reference value, and
a latch circuit holding a result of comparison by said first
comparing circuit and a result of comparison by said second comparison
circuit, at a point transition of the first signal output from said first
detecting unit.

20. (Withdrawn) An optical disc reproducing device, comprising:

a main information reproducing unit reproducing main
information by a reflected light beam from a pit formed on a substrate of
the optical disc; and
an additional information reproducing unit reproducing additional
information by detecting a depth of said pit.

21. (Withdrawn) The optical disc reproducing device according to claim 20, further

comprising a controller limiting reproduction of the main information by said
main information reproducing unit when said additional information reproducing
unit is unable to reproduce said additional information.

22. (Withdrawn) The optical disc reproducing device according to claim 20, further comprising:
- a display unit displaying, when said additional information reproducing unit is unable to reproduce said additional information, the fact that the additional information cannot be reproduced.
23. (Withdrawn) The optical disc reproducing device according to claim 20, further comprising:
- a servo control unit outputting a tracking servo signal; and
 - a controller outputting the tracking servo signal output from said servo control unit when said additional information reproducing unit is unable to reproduce said additional information.
24. (Withdrawn) The optical disc reproducing device according to claim 20, further comprising:
- a servo control unit outputting a tracking servo signal; and
 - a controller inverting polarity of the tracking servo signal output from said servo control unit when said additional information reproducing unit is unable to reproduce said additional information.

25. (Withdrawn) The optical disc reproducing device according to claim 20, further comprising:
- a counter counting number of additional information; and
 - a controller controlling reproduction of the additional information by said additional information reproducing unit based on the value of said counter.
26. (Withdrawn) The optical disc reproducing device according to claim 20, comprising a controller controlling said additional information reproducing unit so that the additional information is reproduced, when contents of the main information cannot be reproduced by said main information reproducing unit.
27. (Withdrawn) The optical disc reproducing device according to claim 20, further comprising a controller controlling said additional information reproducing unit such that the additional information is reproduced in synchronization with reproduction of the main information by said main information reproducing unit.
28. (Withdrawn) The optical disc reproducing unit according to claim 20, further comprising a controller limiting reproduction of the main information by said main information reproducing unit when said additional information cannot be reproduced by said additional information reproducing unit.

29. (Withdrawn) A method of reproduction, comprising the steps of:
- detecting a signal based on a quantity of light beam reflected from an optical disc;
 - detecting a second signal indicative of a difference in intensity distribution of the reflected light beam along a tangential direction of a pit string on said optical disc;
 - reproducing the main information recorded on said optical disc based on said detected first signal; and
 - reproducing additional information recorded on said optical disc based on said detected second signal.
30. (Withdrawn) The method of reproduction according to claim 29, wherein said step of reproducing additional information recorded on said optical disc includes the step of reproducing the additional information recorded on said optical disc based on polarity of said second signal.
31. (Withdrawn) The method of reproduction according to claim 30, wherein said step of reproducing additional information recorded on said optical disc includes the step of reproducing three-valued information recorded on said optical disc.

32. (Withdrawn) The method of reproduction according to claim 29, wherein
said step of reproducing the additional information recorded on
said optical disc includes the step of comparing said second signal with a
first reference value and outputting a positive signal when voltage of said
second signal is not lower than said first reference value;
the step of comparing said second signal with a second reference
value and outputting a negative signal when voltage of said second signal
is not higher than said second reference value, and
adding said output positive signal and the negative signal.
33. (Withdrawn) The method of reproduction according to claim 29, wherein
said step of reproducing additional information recorded on said
optical disc includes the steps of:
comparing said second signal with a first reference
value,
comparing said second signal with a second
reference value, and
holding the result of the comparison of said second
signal with said first reference value and the result of
comparison of said second signal with said second
reference value, at a point of transition of said first
signal.

34. (Cancelled, without prejudice)

35. (Cancelled, without prejudice)

36. (Cancelled, without prejudice)

37. (Cancelled, without prejudice)

38. (Cancelled, without prejudice)

39. (Cancelled, without prejudice)

40. (Cancelled, without prejudice)

41. (Cancelled, without prejudice)